

REMARKS

Applicants acknowledge receipt of an Office Action dated July 14, 2005. In this response Applicants have amended claim 13 to delete the phrase "a homo- or copolymer comprising hydroxycarboxylic acid units". In addition, claim 17 has been canceled without prejudice or disclaimer. Applicants expressly reserve the right to pursue the subject matter deleted from claim 13 and/or the subject matter of claim 17 in one or more continuing applications. Finally, Applicants have amended claim 26 to correct a typographical error. Following entry of these amendments, claims 13-16 and 18-44 are pending in the application.

Reconsideration of the present application is respectfully requested in view of the foregoing amendments and the remarks which follow.

Rejections Under 35 U.S.C. § 103

On page 3 of the Office Action, the PTO has rejected claims 13, 17-30, and 35-44 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent 5,928,737 to Hammer et al. (hereinafter "Hammer '737") in view of WO 92/19680 to Bastioli et al. (hereinafter "Bastioli").

In order to facilitate further prosecution, Applicants have amended claim 13 to delete the phrase "a homo- or copolymer comprising hydroxycarboxylic acid units" and cancelled claim 17.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2143.03.

Here, Applicants submit that neither Hammer nor Bastioli, taken either individually or in combination, teach or suggest, a seamless, tubular food casing produced from a thermoplastic mixture which comprises "at least one other polymer selected from the group consisting of a polyesterurethane, a polyetherurethane, a polyesteretherurethane and a polyalkylene carbonate of the [recited formula]." Accordingly, Hammer and Bastioli cannot render claim 13 obvious within the meaning of §103, and the outstanding rejection §103 ought to be withdrawn.

Hammer '737 relates to a sausage casing comprising thermoplastic starch and, optionally, synthetic polymers, preferably soft and ductile polyamides, polyesters, polyolefins, ethylenelethylacrylate/maleic anhydride copolymers or polyvinylpyrrolidone (col. 3, 1. 48 - 52). Hammer '737 does not disclose or contemplate any of the specific synthetic polymers set forth in present claim 13. These specific synthetic polymers render the presently claimed casing resistant to boiling water, since they form a matrix which protects the starch from being dissolved by steam or hot or boiling water. This benefit of the presently claimed invention is discussed in the present specification, *e.g.*, in the paragraph bridging pages 2 and 3. The discussion in this passage notes that casings which consist only of thermoplastic starch or thermoplastic starch derivatives do not have the desired level of stability to hot or boiling water. When the starch and/or starch derivative is admixed with the specific polymers recited in present claim 13, in particular with the polyesterurethanes, polyetherurethanes, and polyesteretherurethanes, casings which are resistant to boiling water and/or steam are obtained. See also Example 2, in which the casing was resistant to simmering, and Examples 3 & 4 where it is mentioned that the casing was suitable for scalded-emulsion sausage (which is treated with steam or hot water).

With the casing disclosed in Hammer '737, the object of providing a hot-water resistant casing was not achieved, not even with the embodiment in which the casing contains the additional polymers recited in col. 3, 11. 48-55. The polyesters, polyolefins, polyamides, ethylene/ethylacrylate/maleic anhydride copolymers or PVP-copolymers do not form the above-mentioned matrix which impart resistance to steam and hot or boiling water. In the casing disclosed by Hammer '737, the starch is leached out by hot or boiling water and the casing finally disintegrates.

Bastioli adds nothing to resolve the basic deficiencies of Hammer '737. Bastioli's disclosure is limited to a thermoplastically processable, biodegradable polymeric composition comprising a starch-based component and a polymeric component comprising polymers of hydroxyacids. The polymers of hydroxyacids may be homopolymers of aliphatic hydroxyacids, such as polylactides. They may also be copolymers of aliphatic hydroxyacids having 2 to 24 carbon atoms or block or graft polymers between the homo- or copolymers and further polymeric components (see page 2 of Bastioli).

Bastioli fails to disclose the polyesterurethanes, polyetherurethanes and the further polymers recited in present claim 13. Food casings produced from a composition comprising any of these polymers hence cannot be rendered obvious by a combination of Hammer and Bastioli.

If an independent claim is nonobvious under §103, then any claim depending therefrom is nonobvious. *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). See MPEP 2143.03. Thus, Applicants submit that claims 17-30 and 35-44, which ultimately depend from claim 13, are also non-obvious.

With particular regard to claims 14-16, Applicants note that, on page 4 of the Office Action, the PTO has rejected claims 14-16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hammer in view of Bastioli and in view of U.S. Patent 6,406,530 to Bengs et al. (hereinafter “Bengs”). Bengs, however, adds nothing to resolve the basic deficiencies of Hammer ‘737 and Bastioli discussed above.

Bengs discloses thermoplastic compositions based on biopolymers, preferably on starch (col. 1, 1. 13-15). The mixtures are processed into films and other shaped articles, such as casings (col. 4, 1. 28). The properties of the articles are improved when the thermoplastic mixture additionally comprises an effective amount of lignin (col. 2, 1. 60 - 67). Bengs, however, does not resolve the deficiencies of the combination of Hammer ‘737 and Bastioli discussed above and does not provide any motivation to modify a composition based on starch or a starch derivative in such a way as to obtain a hot-water resistant casing.

With particular regard to claims 31-35, Applicants note that, on page 5 of the Office Action, the PTO has rejected claims 31-34 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hammer in view of Bastioli and in view of U.S. Patent 5,346,936 to Buehler et al. (hereinafter “Buehler”). Buehler, as Bengs, fails to resolve the basic deficiencies of the combination of Hammer ‘737 and Bastioli outlined above.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection under §103.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that all of the pending claims are now in condition for allowance. An early notice to this effect is

earnestly solicited. If there are any questions regarding the application, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,


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The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.